

BOROUGH



OF LUTON.

REPORT of Mr. HORACE SWORDER, L.R.C.P., M.R.C.S., L.S.A.,

MEDICAL OFFICER OF HEALTH FOR THE BOROUGH OF LUTON,

FOR THE YEAR ENDED THE 31ST DAY OF DECEMBER, 1898,

TOGETHER WITH A

REVIEW OF TWENTY YEARS' SANITARY WORK,

presented to the Sanitary Committee on the 27th day of January, 1899, and ordered to be printed on the 24th day of February, 1899.

MEDICAL OFFICER OF HEALTH'S OFFICE,

GEORGE STREET, LUTON,

January, 1899.

GENTLEMEN,

I beg to lay before you my Report for the year ended December 31st, 1898, being my Twentieth Annual Report. I also propose to append to it a Review of the Sanitary Work of the last twenty years, and shall, I believe, prove to your complete satisfaction that our labours have been by no means in vain.

During the year 1099 births and 529 deaths have been registered, equal to annual rates of 30·5 and 14·6 per 1,000 respectively. The births, therefore, exceeded the deaths by 570.

There were 176 deaths under 1 year.

" " 39 " between 1 and 5 years.
" " 314 " from 5 years and upwards.

The population of the Borough has recently increased by leaps and bounds, so that I have been compelled to take the population for the year at 36,000. I am, however, informed on good authority that it is much nearer 37,000; as every census has found us over-estimating, I prefer to be under rather than over the mark. Therefore, the figures this year may be taken as erring on the safe side.

The Deaths were thus distributed:—

Small-pox	...	...	...	...	0		Syphilis	...	...	...	...	5
Measles	...	...	...	...	5		Wasting—Infantile	...	...	...	...	34
Scarlet Fever	...	...	...	...	0		Convulsive do.	...	...	...	...	11
Diphtheria, Croup	...	...	...	...	13		Hernia	...	...	...	...	3
Whooping Cough	...	...	...	...	2		Senile	...	...	...	...	43
Fevers	...	...	...	...	1		Injuries	...	...	...	...	5
Diarrhoea, &c.	...	...	...	...	44		Bowel Disease	...	...	...	...	40
Rheumatic Fever	...	...	...	...	3		Urinary Organs	...	...	...	...	11
Erysipelas	...	...	...	...	1		Nervous System—Paralysis, Fits	...	...	...	...	39
Pyæmia	...	...	...	...	1		Liver Disease	...	...	...	...	8
Phthisis	...	...	...	...	45		Suicide	...	...	...	...	2
Serofula, Struma	...	...	...	...	10		Confinement—Puerperal Fever	...	...	...	...	6
Bronchitis, Pneumonia, Pleurisy	...	...	...	...	54		Premature Birth	...	...	...	...	22
Heart Disease	...	...	...	...	42		Influenza	...	...	...	...	1
Cancer	...	...	...	...	22		Other Diseases...	...	...	...	...	56
			TOTAL	...			529					

The above Table of deaths was in use at my appointment in 1879; though it has become antiquated, I still use it for the sake of continuity, but at the same time I fill in and forward to the County Council Table No. 3 of the Society of Medical Officers of Health, which is infinitely more elaborate and comprehensive.

Sixty-five deaths were referred to the seven principal Zymotic Diseases, viz., 5 to Measles, 13 to Diphtheria and Croup, 2 to Whooping Cough, 1 to Typhoid Fever and 44 to Diarrhoea. No death was referred to Small-pox or Scarlet Fever, though 75 cases of the latter were notified. In addition to the above two deaths occurred at Spittlesea, one from Diphtheria and one from Typhoid Fever. These are not included in the Borough returns, Spittlesea being outside our boundary.

Small-Pox.—Recent legislation has curiously enough brought it about that those parents who previously, through the inaction of the authorities, had an uncertain respite from prosecution, have now, by avowing their conscientious objection to vaccination, shaken themselves free altogether from the terrors of the law. In this Borough

alone thousands have availed themselves of the "Conscience Clause." It appears to me that the new Act is a miserable failure if the intention of its authors was to make Vaccination less unpopular. As practical men we have to look at things as they are, not as we might wish them to be. Therefore, it is with great pride and pleasure I can point to our new Small-pox Hospital; to it the first few cases of small-pox could be promptly removed. Notification having at once informed us of the presence of the disease, immediate steps would be taken, after removal of the first case to Spittlesea, to isolate the remaining members of the family in the infected house, due compensation being afforded them; vaccination or re-vaccination would be strongly urged. Of course, a quarantine ward would be preferable, but expense would doubtless stand in the way. When an epidemic occurs in a town like ours no expense would be spared, but when its occurrence is only problematical counsels of perfection, being very expensive, pass unheeded by, the proposer being quite possibly regarded as a sanitary faddist. Having myself the most perfect faith in vaccination and re-vaccination, when properly performed, yet, if in our (in this respect) unprepared state, an outbreak of small-pox did occur, I would to the utmost of my ability fight the disease with the weapons at hand, and hoping for success, though by no means blind to the dictum of an authority, who says: "The characters of Small-pox, its high degree of contagiousness, the rapidity of its spread on congenial soil, defy the efforts to suppress it by isolation alone or to arrest it in its earlier days of invasion; and if vaccination were not at hand to render its remarkable aid the disease would become as common and as widespread in this country as it was in times when sanitary science was unknown."

Measles has been more or less prevalent all through the year, although only five deaths have been referred to it, viz., one in the third quarter and four in the fourth. The disease not being notifiable, one can only guess at the numbers affected by it; the cases were probably like the deaths, most numerous in the fourth quarter. In spite of differences of opinion on the subject, I still maintain that notification of Measles would be a useless expense. If it, however, became notifiable, the first case in every house would suffice. There was some question as to whether one of the elementary schools should not be closed, but the authorities were averse to so doing, and that step could not have been taken in time to be of much practical use.

Scarlet Fever.—It is very gratifying to be able to report that no death from this disease was registered during the year, though 75 cases were notified in 54 houses. Nine of these were removed to Spittlesea and were all discharged well. All the cases were inquired into and the usual steps were taken in every case. I am still of opinion that the Hospital charges for Scarlet Fever cases ought either to be lowered or abolished if we wish to make the Hospital as serviceable as it ought to be and to leave no stone unturned to reduce the number of Scarlet Fever cases. There is no reason, either, why Scarlet Fever cases should pay as much as Typhoid patients, as the former do not require constant day and night nursing for weeks as the latter do.

Whooping Cough.—Only two deaths were referred to this disease, both in the fourth quarter.

Influenza.—Sporadic cases occur from time to time, but we have not suffered from any epidemic this year.

Typhoid Fever.—Only one death was referred to Typhoid Fever, but one more death occurred at Spittlesea, both in the fourth quarter. Sixteen cases were notified during the year, in 16 different houses and in all three Wards. In every case the premises were inspected and in a few instances minor sanitary defects, such as bell-traps, were found. At least four of the cases were imported *without doubt* into Luton, one even from Omdurman. In the first quarter one case was notified, two in the second. In the third quarter I reported that one case was notified in September, and quite justifiably so, only a *post mortem* revealing it to be an obscure case of tuberculosis, which had closely simulated Typhoid Fever. In the fourth quarter 13 cases of Typhoid Fever were notified, viz., 7 in October, 2 in November and 4 in December; of these one died in Luton and one at Spittlesea. Five of these cases were removed to Spittlesea; three have since been discharged well, one is recovering and one died five days after admission. In one instance the bed and bedding were destroyed and the articles replaced.

Diphtheria and Croup.—During the year 39 cases of Diphtheria were notified, and 3 of Membranous Croup. Of these 13 died. In the first quarter, 4 cases were notified; in the second, 12; in the third, 10; and in the 4th, 16. The cases were widely spread all over the Borough, 42 occurring in 41 houses. In very few instances could any sanitary defect be found, and then only of the slightest nature. The milk was supplied to the infected houses by a large number of vendors. One case was imported from a long distance, only arriving at Luton seriously ill. While, therefore, we cannot ascribe the small outbreak to any particular cause, we can confidently say that it was not spread by any particular school, through the medium of milk, or by the existence of local drainage defects. The weather in the fourth quarter was changeable, damp and often unduly mild, so that these atmospheric conditions may possibly be in part responsible for the larger mortality of this quarter. It is of little use reporting the average age of the cases notified, for one was entered as aged 57, two others as 37, and in 3 cases no age was given at all. Excluding these, the average age of 34 cases was 5 years 9 months.

THE EXCITING CAUSE is generally agreed to be the Klebs-Löffler bacillus, which is found in the throats of the majority of Diphtheria patients. There is also, however, considerable evidence to show that, during epidemics, people—especially those in contact with Diphtheria patients *e.g.*, nurses and such like—may, without being really ill, or at most complaining of sore throat, be capable of conveying the real disease to others. The disease is frequently traceable to a previous patient, from whom it may be communicated to others (*a*) By contagion, clothes, bedding, etc.; or (*b*) By direct inoculation of the mouth by the discharges, or by fingers contaminated therewith.

Although much labour has been given to the investigation into the factors at work in the causation of Diphtheria, very little has been added in the past year to our previous knowledge of the causes predisposing to the disease. An enormous number of such causes has been stated, including such different headings as sanitary defects, faulty house accommodation, climatic variations, milk supply, etc., and in spite of the fact that many of these conditions undoubtedly play some part in the production of the malady, there is still a good deal of uncertainty as to the relative import of the alleged predisposing causes. The following is a short *résumé* of the causes which appear to be the most constant, these being mentioned in order of their relative importance:—

- I. **OVERCROWDING.**—This is probably the most important predisposing cause, epidemics almost always springing up amongst, or being traceable to, the larger centres of population in which the disease is practically endemic.

Diphtheria is now more frequent in urban than in rural districts—in direct contradistinction to the state of affairs some years ago; this being probably due to the latter districts being less thickly populated. The greatest number of cases are stated to occur between the ages of three and twelve years. Dr. Thorne Thorne suggests that "this may possibly be due to the greater exposure to infection during this period from the aggregation of children in schools."

However, Dr. William R. Smith, Medical Officer of the School Board for London, who was deputed to make an exhaustive enquiry into the prevalence of Diphtheria in London and elsewhere, showed that age as an absolute factor in the incidence of the disease is enormously more active than any school influence, the period of greatest liability to the disease beginning before school age is reached, and as a result of special enquiry into 2,168 consecutive cases, found that a very small number could be traced to even a possibility of school infection. This is of course an *ex parte* statement, and may naturally be somewhat biased.

The disease is also more prevalent among the poor, possibly because overcrowding increases the facilities for contagion and infection.

- II. SEWAGE EMANATIONS predispose to Diphtheria, probably not by actually conveying the germ of the disease to the throats of those inhaling them, but by giving rise to a chronic sore throat and impairing their general health, so that they readily succumb to the first opportunity of infection. Sir Richard Thorne points out the fact that Diphtheria has greatly increased in late years, especially in towns, while at the same time sanitary and hygienic conditions, and especially the removal of sewage, etc., have been greatly improved, so that diseases undoubtedly due to sewage infection (such as Typhoid Fever) have greatly diminished. This seems rather to contradict the association between Diphtheria and impaired sanitary conditions.
- III. MILK may undoubtedly be responsible for a certain number of cases; but the method of its contamination is not well understood. The bacilli multiply readily in milk without materially changing its appearance.
- IV. WATER CONTAMINATION probably has little or no bearing on the causation of Diphtheria.
- V. WIND has very little, if any, action in the distribution of the disease: perhaps by this agency it is that some of the sporadic outbreaks are originated.
- VI. SOIL AND DRAINAGE.—Diphtheria seems to be more prevalent in damp, low-lying and badly drained districts, and a connection has been traced between outbreaks of Diphtheria and an increase of the sub-soil water. Thorne has shown that the soil itself, if properly drained, is not an important factor. Newly inhabited houses on "made soils" are said to be especially fruitful sources of the disease.
- VII. WEATHER AND SEASON.—The disease becomes more prevalent towards the end of autumn, the largest number of cases usually occurring in the fourth quarter. It is doubtful whether this depends on the coldness or dampness of this quarter. Dr. Newsholme says that Diphtheria is more prevalent after a hot, dry summer, this apparently opposing the theory of the disease being predisposed to by damp.
- VIII. CONNECTION WITH OTHER DISEASES.—Diphtheria is especially prone to follow closely after certain affections, particularly in children. Of these Scarlet Fever is the most important, probably owing to the sore throat associated with it offering a suitable nidus for the germs of Diphtheria. Such a case we have recently lost at Spittlesea. Many domestic animals are said to suffer from a disease identical with, or very similar to, Diphtheria. Cats are said to be especially obnoxious.

Diarrhoea.—Thirty-seven deaths among infants were thus referred, one death between the ages of 1 and 5, and six from 5 years upwards, or 44 in all. The one exciting cause of the above large mortality without which the predisposing causes would in my experience be nearly powerless, was abundantly present, viz., the overpowering heat of a burning sun: the weather was for weeks so phenomenally hot that even the strongest felt their hold on life much less secure than usual by reason of the exhaustion caused by the incessant semi-tropical heat, the houses being baked all day and retaining their heat all night.

In addition, 34 deaths were referred to Gastro-enteritis, yielding the very large total of 71 deaths from these causes under 1 year. Here it should also be noted that 19 deaths under 1 year were referred in this same quarter to Wasting, etc., this large mortality from these three diseases can, from my own experience, be referred to the same cause, viz., continued hot weather.

In my third Quarterly report I wrote:—"Forty deaths were referred to this disease, of which no fewer than 35 were of infants under 1 year. This by no means represents the full mortality, as 30 infant deaths were referred to Enteritis. In every hot summer I have repeatedly explained the causes of this large mortality among infants, so that no object is served in recapitulating them. A few grains of comfort may possibly be derived from the consideration, that we have lost quite a number of infants, mostly puny, who, had they escaped the ravages of the phenomenally hot summer would undoubtedly have tended to swell the rate of succeeding quarters by falling victims to Wasting, or to the first serious disease which befell them. It will be something for our manufacturing towns to boast of, not so much when these delicate infants are saved, as when the conditions are removed on which their delicacy depends. The simple saving of these feeble lives alone, would at least in later years swell the huge and awful mortality from Phthisis and other tubercular diseases. Our Phthisis rate is an improving one. Would this continue to be so if the survival of the unfit became the rule in the Borough? These somewhat pessimistic remarks are not the outcome of despair, and they will not tend to abate our energy in matters sanitary; they are rather philosophical reflections inviting us to see a silver lining to a cloud which at first sight appears entirely black."

Since writing the above, my attention has been most powerfully directed by Sir Richard Thorne and other writers to the subject of tubercular infection of infants by means of tubercular milk. Sir Richard, in the second of his lectures on the Administrative Control of Tuberculosis, showed conclusively that while the death rate of Tubercular Phthisis had very considerably declined, that of Tabes Mesenterica had considerably increased. I only advert to the subject here for the purpose of quoting Sir Richard Thorne Thorne:—"There was also a close relation between Tabes Mesenterica and infantile Diarrhoea; and the death rates from each rose and fell together. Probably many cases under each heading should properly be returned under the other. Apart from errors of registration, which were probably mutually corrective, Diarrhoea and those Catarrhal conditions of the alimentary Canal to which infants were so liable, rendered them extremely susceptible to tubercular infection, which the less sensitive, and for the most part, healthy mucous membrane of the adult was able to resist."

It would appear that continued hot weather by lowering the vitality of children, mostly of puny constitution, renders them more vulnerable to Catarrhal conditions of the digestive tract, and so possibly lays them open to tubercular infection, or possibly tubercular milk may have previously so undermined their constitutions that they cannot stand up against the further assault of intense heat. Fortunately, there is absolutely no reason why this condition of things should continue, for the bacilli may be completely destroyed by boiling the milk for five minutes. The above authority says, "the popular prejudice against boiled milk was confined to this country, and, under the circumstances, was inexplicable."

Phthisis.—Forty-five deaths were referred to Phthisis, viz.: 16 in the first quarter, 8 in the second, 11 in the third, and 10 in the fourth, giving a rate of 1·2 per 1,000. In the Appendix to this Report will be found the

comparative Phthisis mortality of the last 20 years. In last year's Report I referred to the terrible ravages of Tuberculous diseases, allotting them one-fifth of the deaths from all causes. Attention was also directed to the dangers of Tuberculous Sputum, especially when dried, and instructions given as to the treatment and disposal thereof; disinfection of rooms in which "Consumptive" patients had lived, and of those in which they died was also alluded to.

Since the appearance of my last year's Report the subject of Phthisis and of Tubercular diseases in general has come decidedly to the front, and come, I hope, to stay.

At an influential meeting held at Marlborough House, and presided over by H.R.H. the Prince of Wales, Sir William Broadbent delivered a highly-interesting and instructive speech, which ought to be circulated broadcast.

The gist of this speech and of the numerous articles lately written on the subject may be shortly summarized as follows:—

"Phthisis and Tuberculous diseases generally would become in time extinct":—

FIRSTLY.—If all the expectoration of consumption patients were to be thoroughly disinfected and disposed of by methods I explained in last year's report and previous ones.

SECONDLY.—If all milk were to be boiled before consumption—boiling for five minutes absolutely destroying the germs of the disease.

THIRDLY.—If no cow were used for dairy purposes which failed to stand the Tuberculin test or to pass a careful veterinary inspection. *Apropos* of this the Prince of Wales, in his speech at the meeting just alluded to, said:—

"If people would sometimes sacrifice their cattle which are suffering from Tuberculosis they would do more by good example in stamping out this complaint. I mention the matter because I have been informed that Her Majesty the Queen gave authority that 36 of her dairy cows at her home farm, which on being tested by tuberculin were found tuberculous, were to be destroyed."

FOURTHLY.—If the flesh of the tubercular animals were to be rejected for purposes of food and destroyed; in the case, however, of animals in which the internal organs only are affected the flesh may be eaten—provided it be quite free from Tubercle—if first *thoroughly* cooked.

Further, it is desirable that Hospitals or Sanatoria for Phthisical cases be strongly advocated—not as a means for the total extinction of the disease, but in order to check the disease, more especially in its early stage, and also to serve as a centre for the practical instruction of such cases in the employment of adequate preventive measures.

These Sanatoria are suggested for the purpose of carrying out the "Open-air method of treatment," which has been found so successful abroad, and has also met with a considerable measure of success at home.

Only those who have much to do with Tubercular diseases, of which Phthisis is the best known to the public, can appreciate what awful misery they cause and what a scourge they are to the human race.

Public education is fast advancing, and will advance, and this is the best guarantee for future progress, since one can hardly believe that when the public thoroughly realise that such a great source of misery and disease can be almost entirely removed, they will allow even a large expenditure of money to stand in the way.

The process of gradual extermination of all cows which cannot stand the Tuberculin test would demand money, but by this means tubercular cows would become almost non-existent; this step, however, would be practically useless unless model cowhouses were insisted upon, for those at present so often seen throughout the country with their overcrowding, filth, and defective sanitary arrangements, would in no time induce further cases of the disease in healthy animals stalled within them. To erect model cowhouses all over the country money would have to be advanced at a very low rate of interest to those engaged in that department of the milk trade.

It will be obvious that the building of Sanatoria for open-air treatment, unaccompanied by other preventive measures, would not be cutting at the root of the mischief however useful they might be as accessory means.

I hope I have by the above remarks made it clear that by preventing the supply of Tubercular milk or flesh, or by neutralizing their injurious effects by thorough boiling or cooking before consumption, and by absolutely disinfecting the expectoration so that it cannot become pulverized, disseminated and inhaled, we should almost, if not entirely, do away with a class of diseases of which "Consumption" is the chief—diseases which slay their tens of thousands annually.

Cancer.—Twenty-two deaths were referred to Cancer against 36 in 1897. Dr. Symons, the Medical Officer of Health for Bath, has gone thoroughly into the subject of "Cancer in relation to the dwelling," and as a result of his very careful enquiry he contends that the theory that the dwelling has any relation to Cancer has completely broken down under his investigations!

Improved diagnosis is by most observers generally credited with some proportion of the increase.

Infantile Mortality.—There were 176 deaths of infants under one year, equal to an infant mortality of 160·1 deaths per 1000 births.

Again I must remark that the rate depended upon the large infant mortality in the third quarter.

In the 1st Quarter the Infant mortality was	...	...	...	...	71·6
" 2nd "	"	"	"	"	60·1
" 3rd "	"	"	"	"	378·9
" 4th "	"	"	"	"	150·7

If the summer had only been a cold and wet one, we should have had to record the lowest infant mortality of the last 20 years: as it was, that of the second quarter was phenomenal, and that of the first very nearly so.

Sanitary Inspections.—The list of nuisances abated as the result of these inspections is a long one, and numbers 87 more than last year; this speaks volumes for the assiduity and tact of the Inspector of Nuisances, and his able assistant. Together with them I have visited the poorer parts of the Borough more especially, and reported the results of those visits to you.

Lodging Houses.—At your express wish, together with the Inspector, I visited the three Common Lodging-houses of the Borough. At our visit we found all three in a cleanly condition, the most cleanly being the one in Duke Street and the least so that in Burr Street. We further, on careful measuring, discovered that in all the houses there was, in some of the rooms, more or less overcrowding, provided the beds were all occupied. In every instance the arrangements for screening the beds occupied by different couples were noticeable by their absence. A detailed report, including the measurements of every room, has been presented to you.

Nuisances.—The following is a list of the Nuisances abated during the year :—

Defective Drains and Belltraps	...	...	...	...	...	696
No constant Water Supply to W.C.'s	...	...	...	...	...	239
Drains and W.C.'s blocked	...	...	...	...	...	134
Defective W.C.'s	...	...	...	...	...	133
No Receptacles for ashes	...	...	...	...	...	39
Offensive smells and accumulations	...	...	...	...	...	30
Insanitary Privies	...	...	...	...	...	26
Insanitary Dwellings	...	...	...	...	...	22
Sinks not disconnected	...	...	...	...	...	20
No water supply to Houses	...	...	...	...	...	19
Water apparatus to W.C.'s out of order	...	...	...	...	...	17
Defective Ventilating pipes	...	...	...	...	...	10
No Dungpits to Stables	...	...	...	...	...	9
No Ventilating pipes to Drains	...	...	...	...	...	8
Defective Pavings	...	...	...	...	...	5
No Intercepting Traps	...	...	...	...	...	3
Defective Channels and Wastepipes to sinks	...	...	...	...	...	3
Defective Ashpits	...	...	...	...	...	3
No Drains to Stables	...	...	...	...	...	3
Insufficient Closet Accommodation	...	...	...	...	...	3
Defective Soil Pipes to W.C.'s	...	...	...	...	...	2
Defective Urinals	...	...	...	...	...	2
Defective Cess-pits	...	...	...	...	...	1
No separate Sanitary Accommodation for Females	...	...	...	...	...	1
Slaughter houses requiring White-Washing	...	...	...	...	...	1
Other Nuisances	...	...	...	...	...	42
Total	...	...	...	...	1,471	

In connection with the above, 362 notices were served. The Inspector thanks the owners of property for their consideration in attending promptly to his requirements, and alludes to the smaller number who give him a little trouble.

Insanitary Dwellings.—Twenty-two Houses were found in an unsanitary condition, and were thoroughly cleansed by their respective owners. Eighteen old houses have been pulled down, and three others closed.

Privies.—For privies and four dumb-wells have been connected with the Sewer during the year; only forty-three now remain, viz., 23 in the North Ward, 15 in the East, and 5 in the West.

House Drains.—Twenty Sinks have been disconnected. A large number of Bell-traps have been replaced by six-inch Earthenware Syphon gulley-traps.

Ashes and Refuse Collection.—11,814 loads of Ashes and Refuse have been removed by the Corporation teams. The disposal of ashes was as follows:—

Sewage Works	...	...	...	6,091 loads.
Sold...	...	...	...	1,104 ,,
Elsewhere	...	...	...	4,619 ,,
Total	...	...	11,814 loads.	

This gives a total of 311 loads over last year. The Inspector draws the attention of the Committee to the fact that the disposal of ashes is a very difficult matter, and he trusts that a Refuse Destructor will soon be in existence in the Borough. The quantity of ashes has steadily increased from 8,756 loads in 1893 to 11,814 loads this year.

Cleansing of Closets.—During the year 269 loads of Night Soil have been removed at a loss of £12 9s. Privies have almost arrived at the vanishing point; I hope that the new century will know them no more.

Ventilating Shafts.—One additional shaft has been erected; the total number in the Borough is 39.

Water Supply.—I have analysed twelve samples during the year. Eight were unfit for domestic purposes, and a pure supply was provided. Owing to the state of the springs, induced by the long-continued drought, a large number of houses supplied with pumps and wells were without water, so that the Company's supply had to be laid on.

Milk Purveyors.—Under the "Dairies, Cowsheds, and Milkshops Order of 1885," three persons have been registered as purveyors of milk.

Food and Drugs Act.—In connection with this Act, 55 samples have been submitted to the Public Analyst, viz., Milk, 45; Butter, 10. One sample only of milk was adulterated; the case was dismissed. *Several samples were returned as poor.* The standard is so very low that it does not follow that the samples described as poor, though uneconceded, were really destitute of added water, or minus the full amount of cream; failing either of these treatments, the milk may have been largely derived from tuberculous cows. This suggests to me whether the children of our poorer classes do not have a large monopoly of milk which would be described as poor; therefore, taking it for granted that naturally poor milk is largely derived from tuberculous cows, it would consequently follow that the children of the poorer classes would fall ready victims to tuberculous disease of the intestines; tubercular milk having been proved, beyond all doubt, to be the usual means of infection.

Slaughter Houses have been frequently visited, and with one or two exceptions were in a satisfactory condition. In the light of recent investigations on the subject of Tuberculosis, I must avow myself a convert to the views of those who strongly advocate public slaughter houses.

Bakehouses have all been examined, and found to be in a fairly satisfactory condition.

Markets have been systematically visited. On October 22nd, I was called to the Market to examine some rabbits which were exposed for sale; being of opinion that they were unfit for food, I ordered them to be seized and taken to the Town Hall. They were condemned by a Magistrate in the usual way and ordered to be cremated. In all there were 155 rabbits. On November 16th, I attended in Court, and the defendant was fined £5 and £1 11s. 6d. costs.

In addition, the Inspector examined other articles of food at the request of the owners, on their arrival at Luton, before being exposed for sale. When he found them unfit for food he forthwith caused them to be destroyed.

Factory and Workshop Acts.—The Factories and Workshops have been visited during the year, and, on the whole, found to be in a satisfactory condition.

Main Drainage and Storm Water Scheme.—Over a mile-and-a-half of new (egg-shaped) intercepting brick and concrete sewers have been constructed; this completes the main sewers under the scheme. About one mile of pipe sewers (patent joints) have also been laid. The remaining storage tanks have been constructed giving a capacity of nearly three million gallons. Half a-mile of storm water drains have been laid.

Sewage Works.—The amount of sewage pumped on the farm has been 572,167,000 gallons, against 808,894,000 gallons for 1897, showing a decrease of 235,727,000 gallons, or an average of 649,000 gallons per day less than 1897; this is accounted for by the new sewers being watertight, whereas the old sewers being in a very leaky condition, allowed a large quantity of subsoil water to enter. The pumping account shows a saving of £438 over 1897. This satisfactory state of things quite fulfils the previously expressed opinion of the Borough Engineer, who foretold this large reduction of expenditure.

Disinfectants.—The cost for the year has been £87 18s. 10d.; they are given away quite gratuitously.

Spittlesea.—Nine cases of Scarlet Fever, five cases of Typhoid, one of Diphtheria, one of Membranous Croup, and one of continued Fever, were removed during the year, making a total of 17 cases or 40 fewer than last year. Three of these patients died, viz.:—one of Membranous Croup (Diphtheria), one of Typhoid Fever, and the third of Tuberculosis (not Typhoid). The nursing has been very satisfactory, and the patients, apparently, most appreciative of the services rendered them. 156 visits have been paid during the year, covering practically 624 miles—the journey if not quite two miles, being from its hilly nature a good equivalent. I have attended every case, no other medical man claiming his right to do so. 45 visits to Spittlesea were made in the first quarter, 26 in the second, 6 in the third, and 79 in the fourth.

Schools.—None have been closed during the year. There was some question as to whether one of the Elementary Schools should be closed or not on account of the prevalence of Measles in the fourth quarter; the authorities were averse to the measure, and as little or no practical good appeared likely to come of it, no such action was taken.

Immediate Notification.—The Inspector of Nuisances has again kindly furnished me with the table subjoined:—

Name of Disease.	No. of Cases.	North Ward.	East Ward.	West Ward.	No. of Houses Infected.
Scarlet Fever ...	75	12	16	47	54
Erysipelas ...	36	18	4	14	36
Typhoid Fever ...	16	8	4	4	16
Diphtheria and Membranous Croup	42	15	16	11	41
Puerperal Fever ...	3	2	—	1	3
Continued Fever ...	2	2	—	—	2
Total ...	174	57	40	77	152

A case of Anthrax is not included in the above table, this disease not being notifiable.

Infectious Diseases, advice as to—In the 1st quarter I again urged the advisability of Small Pox Hospital accommodation; this was rapidly forthcoming. No further advice was called for, thanks to Immediate Notification and plenty of Fever Hospital accommodation.

Sanitary Requirements.—The Local Government Board, in its instructions to Health Officers, asks for a statement of Requirements. I have, therefore, consistently given it year after year. Unfortunately, it has been almost to the detriment of my Borough, as other Districts in the County, by apparently omitting many of their requirements, have in the reports of the County Medical Officer appeared to be in a much better sanitary state than Luton. I shall, therefore, report our requirements, but appeal at the same time to Dr. Wilde, to exercise the utmost discretion in making use of the statement.

I.—A Steam Disinfector.

II.—Continue replacing (as we are rapidly doing) obsolete Bell-traps by Syphon-traps.

III.—Continue providing a proper water supply to every closet.

It will be seen on comparing these requirements with those of last year, that numbers 1 and 3 have disappeared. We have erected a Small Pox Hospital 250 feet from Spittlesea on a site almost second to none, where patients will have every chance which the fresh air and healthy surroundings can give them. The Hospital, which is of wood and iron, was erected by Mr. Evans, C.E. our Borough Surveyor; it will easily accommodate 6 patients in two wards, wards which for airiness and light can hardly be surpassed. The Hospital with its outbuildings is complete in itself, and therefore no communication with Spittlesea would be allowed.

By building this Hospital we have extra accommodation at Spittlesea itself, so that until Small Pox occurs, we can do without the small additions at Spittlesea which constituted Requirement No. 3 last year.

Number 6 of last year I have omitted—it was to draw the attention of the neighbouring Rural Sanitary Authorities to the importance, both to themselves and to us, of ensuring the proper enforcing of the "Dairies, Cowsheds and Milkshops Order of 1885." The importance of the above is greater than ever in the light of recent investigations into the subject of Tuberculous Milk, but it appears that little can be done until the Legislature makes the presence of Tubercular Disease in Cows notifiable.

In conclusion, I would thank all members of the Town Council, past and present, for appointing and re-appointing me again and again, so that I may proudly remind them that this is my 20th Annual Report. A review of the work of the past 20 years is also added to this Report.

My Sanitary work, especially during the last eight years, has been more than ever a labour of love, and often out of all proportion to the remuneration I have received—I mean pecuniary—for remuneration I *have* received in the importance of my work, and the increasing interest it demands, due entirely to the advances sanitary science has made, and to the certainty one feels that these advances will be more rapid in the future than they have been in the past. If money were no object, and the poor could be housed decently, and Tuberculosis, by the means I have indicated be rooted out, the death-rate of the country would so marvellously decline, that the number of the members of my honourable profession would require considerable curtailment.

It only remains for me to thank my brother officials for their valuable help during the past year, and you, gentlemen, for the confidence you have reposed in me.

I am, Gentlemen,

Your obedient servant,

HORACE SWORDER.

Review of Twenty Years' Sanitary Work in the Borough of Luton.

HAVING been blessed with health and strength to work for so many years as Medical Officer of Health to this important and rapidly-increasing Borough, I think that the twentieth year of my term of office should not be allowed to expire without taking stock of things as they are, and comparing them with things as they used to be, all those years ago.

To this end I will now divide my subject into three parts :—

FIRST.—Some remarks concerning some of the principal diseases and their death-rates, including the Death-rate, Birth-rate, Zymotic and Infant Death-rate ; dividing for statistical purposes the twenty years of my term of office into two equal terms of ten years.

SECOND.—I will give a short *résumé* of the Sanitary work done during the years under review, and

THIRD.—Will offer some remarks as to the practical outcome of this work.

The Population at the Census of 1871 numbered 17,316.

" " "	" " "	1881	"	23,955.
" " "	" " "	1891	"	30,006.

And now, I am assured on the authority of the Town Clerk, that it cannot number less than 37,000

It may be interesting here to state that the population of Luton at the Census of 1821 was 2,986 ; of 1831 3,961 ; of 1841, 5,827 ; of 1851, 10,648 ; and of 1861, 15,329.

The Birth Rate during the first decade averaged 36·3 per annum, and during the second 29·3. I cannot with certainty state what is the import of this reduction, but it probably indicates fewer reckless marriages, and, therefore, would be a factor in the reduction of the Infant Mortality.

The Death Rate during the first decade averaged 19·4 per 1,000.

" " second "	" " "	15·4	" "	"
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The Infant Mortality during the same periods averaged 176·5 Deaths per 1,000 Births.

and 158·4 .

The above is equivalent to an infant death-rate of 6·4 per 1,000 in the first decade, and 4·6 in the second.

Now we come to the **Zymotic Diseases**.

The Zymotic rate during the first decade averaged 3·3 per 1,000.

" " seeond "	" " "	1·8	" "	"
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Smallpox.—It is extremely satisfactory to record that with all the danger incurred by the passage through our Borough Lodging houses, etc., of some thousands of tramps annually, and the present unvaccinated state of our large juvenile population, that we have only to record two deaths in the 19 years. We had, at least, eight other cases; these came to my knowledge early, and were able to be removed to the fever ward of the Infirmary ; such removal, however, has not been allowed for the last few years. By prompt action in every case the threatened plague was stayed. About ten years ago a tramp left the Workhouse complaining only of pain in the back, found his way to Ampthill, eraved for water from a few cottages and managed to convey the infection directly and indirectly to about 70 people, ruining the Ampthill straw trade but leaving ours unharmed.

Measles.—In the first decade, the deaths averaged 10·1 per annum against 8·9 in the next. The highest number of deaths in any one year was 31, there was no death referred to Measles in three of those years, and only one in four more. The great increase in the population renders these and the following figures very remarkable, as it shows a decrease in rate from ·37 to ·26.

Scarlet Fever.—In the first decade, the deaths averaged 13·4 per annum against 5·2 in the next, giving rates of ·49 and ·15. We seem to be just at the end of an epidemic which has lasted about three years. About 500 cases have been notified, and only fifteen deaths registered, giving a mortality of only 30 per 1,000.

Diphtheria and Croup.—In the first decade, the deaths averaged 14·2 against 7·8 in next, with rates of ·52 and ·23. Here, again, there is a great reduction; whereas in the lowered Measles and Scarlet Fever mortality, sanitary measures possibly played (and especially in Measles) a very subsidiary part ; in Diphtheria and Croup the continuous drying of the subsoil through drainage, probably accounts in a large measure for the lessened mortality. Apart from direct infection from a previous case (possibly a cat), from inhalation of sewer gas, etc., damp houses and damp neighbourhoods are probably the most potent predisposing causes of these diseases, the Klebs-Löffler bacillus being the exciting cause.

Whooping Cough.—In the first period, the deaths averaged 16·1 against 6·4 in the second, equal to rates of ·59 and ·19. The reduction in the above mortality is highly satisfactory even though it be thoroughly inexplicable.

Fever.—In the first period, the deaths averaged 5·5 and in the second 3·8. The reduction in the deaths referred to fevers is satisfactory in spite of our typhoid troubles of the last few years. Nearly all the large typhoid epidemics in this country have been water borne ; it is, therefore, satisfactory for us to contemplate the fact that we have a water supply almost second to none in quantity and organic purity, distributed in iron pipes and with no

apparent chance of contamination either at the works or during distribution. Over 23 gallons are supplied per head per day. Our outbreaks of typhoid have apparently been due to drainage defects; one year the majority of the cases occurred in two or three low-lying streets which had not been taken over by the Corporation or properly sewered. In the larger epidemic of 1895, the mischief appeared to have arisen from the scamping of sewer and drain work some years previously; since these defects were remedied, cases of typhoid have occurred in neighbouring parts, but not one case in the previously affected area.

Diarrhoea, etc.—In the first period, the deaths averaged 33·9 against 27·4 in the second. Our diarrhoea mortality is almost noticeable by its absence in other than hot summer weather. In long-continued summer heat diarrhoea sets in furiously among the infants of our poorer inhabitants, and generally claims twenty or thirty victims, often not one death occurring among the more well-to-do. Luton is a manufacturing town, whose mothers are deeply engaged in the trade; their children, therefore, are often irregularly fed or hand-fed. Sanitation apparently has little effect in reducing this mortality, which is essentially due to social rather than to sanitary causes. Excessively hot weather lowers the vitality of these hand-fed children, many of whom have been born prematurely.

Many of those immature or weakly children who do not during the hot weather fall victims to diarrhoea, either swell the deaths referred to marasmus or convulsions; or, if, shall I say, unlucky enough to survive all these pitfalls, manage to fall victims to the first serious disease—such as measles or whooping cough—which falls in their way. Of course one does not deny that a certain proportion of these deaths may be due to insanitary causes brought about in various ways, but usually by the action of living germs upon milk. These germs may be introduced into the milk, by its dilution with impure water through the agency of dishonest vendors, or through improper storage, exposing the milk not only to germs inside the dwelling, but also to those which may come from outside owing to the presence of decomposing filth, or from impure ground air arising from a soil reeking with living germs. I am only concerned to state that the two latter causes are, I believe, fairly exceptional in Luton, and infinitely more so than those having their origin in dilution and storage. All these causes together do not upset my statement that the mortality from diarrhoea depends more upon social than sanitary causes. I have not here alluded to the subject of milk infected by tuberculous cows, as I have gone so fully into it in the Annual Report.

Having disposed of the principal zymotic diseases, we come to the last two diseases which I propose to bring to your notice, viz.:—Phthisis and Cancer.

Phthisis.—In the first period referred to there were 533 deaths against 411 in the second, or averages of 53·3 and 41·1, equivalent to rates of 1·9 and 1·2. This large reduction in phthisis mortality is probably due to many causes, the principal, however, being the drying of the subsoil. Among other causes may be stated the putting into effective operation of model bye-laws, thereby insuring better built and drier houses, improved drainage, larger window space and therefore better ventilation, the latter being also aided by a fireplace or ventilating shaft in every bedroom. The new Factory regulations tend, with the older ones, to diminish the Phthisis death rate.

Cancer.—This is the only disease that will not lend itself to the proper treatment from my point of view, viz.:—that of showing a decrease of mortality; for I find that in the ten years there were 153 deaths, and in the nine 178, giving averages of 15·3 and 17·8. I am quite unable to account for this apparent increase; some of it I am quite willing, however, to allow may be due to improved methods of diagnosis, none, in my opinion, to the popular cause—tomatoes. There is one fact to bear in mind, and the figures I have given you bear it out, that there are more people now living to those ages at which cancerous diseases are rife; a proportionate number would, therefore, in all probability fall victims to cancer.

Now we come to the second part of my address, in which I will give you a short *résumé* of the sanitary work done during the years under review, with occasionally a few interesting facts thrown in; facts will now be the rule and figures the exception. When I was appointed Medical Officer of Health, Luton possessed Deodorizing Works where the sewage was treated by process after process, at least a dozen in all were tried—and found wanting, and for this reason all the sewage, after precipitation of the solids, etc., was discharged into the river Lea, which is contiguous to the works; but the sewage contained any quantity of colouring matter from the dye works, and this was little affected by the treatment. Up to 1885 the works stood on 21 acres of ground, of which 17 had been acquired in 1879, but in 1885 the sum of £20,000 was obtained on loan, and with it, 80 acres of land were purchased, about a mile or so distant; to pump the sewage up and on to this land a new and powerful pumping machinery was supplied and erected by Messrs. Hayward-Tyler & Co., of Luton and London, in addition to that in use previously; all the day sewage was pumped on to the farm and none was discharged into the Lea, though this accident happened possibly to a certain extent in times of exceptionally heavy storms. So anxious have the authorities always been to do their utmost to prevent pollution of the Lea, that Major Flower, the able and genial Sanitary Engineer to the Lee Conservancy, always speaks of Luton as his pet—or model town, and holds it up as an example to other places on the river.

This great outlay has been abundantly justified, and people have come from far and wide to see our Sewage Farm. In my Annual Report for 1887, I stated "It was particularly gratifying on the occasion of the visit of the Association of Municipal and Sanitary Engineers and Surveyors in October last, to hear the terms of unstinted praise in which they referred to the work which had been so well planned and carried to such a successful termination." The Borough Surveyor was Mr. W. H. Leete, C.E., now County Surveyor to the County of Bedford. Now, under Mr. A. J. L. Evans, C.E., our present Engineer and Surveyor, we are carrying out a Main Drainage and Storm Water Scheme. The outfall, intercepting and other sewers, together with the Storm Water Drainage will take about two years to complete, and is estimated to cost £40,000.

Last year one new tank was completed, giving a storage capacity of about 1,000,000 gallons; two others have been completed this year; the whole having a capacity of 2,000,000 to 3,000,000 gallons.

It cannot be said that a town is standing still which has borrowed since 1878 the sum of £70,000 for Sewerage and Drainage Schemes alone.

Privies.—Since my appointment nearly 1,500 privies have been converted into closets, so that at the present time we have fewer than 50 remaining. We experienced years ago great difficulty in getting rid of the privies unless their contents percolated on to adjoining property; even members of the Sanitary Committee announced their preference for privies versus closets, one member being heard excitedly to say, "Give me the old-fashioned privy!" In order to get a stage further the authorities allowed privies to be converted into flush-pan closets where the company's tap was in close proximity; this was a sort of half-way house. Since the typhoid trouble in 1895 the Company's water has been gradually laid on to all the closets, so that we are, by degrees, getting into a much better sanitary condition. In this connection I might mention that for the first few years of my appointment that abomination called a night-cart

went its nightly rounds; year by year these were more infrequent, and now this disgrace to the closing years of the nineteenth century is almost a memory of the past.

Well Water.—About 200 samples of water have been analysed, and 120 condemned, a pure supply of water being provided in every instance. A fair number of these samples were of the worst description.

Sinks Condemned.—One fertile source of mischief all these years has been the connection of so many sinks directly with the sewers. The new Bye-Laws prevented this nuisance being perpetuated, but did not affect old property. It is satisfactory, therefore, to report that we have during the last six years, corresponding with the term of office of Mr. Charles Wright, the Inspector of Nuisances, disconnected wholesale.

Removal of Refuse.—The prompt removal of refuse has always received great attention, but has been carried out much more systematically the last six years. Our great difficulty is to know what to do with this ever-accumulating rubbish. A refuse destructor is much needed, and has been discussed, but up to the present has not appeared upon the scene, though one rather confidently looks forward to its advent at no very distant date. The local farmers take a very small proportion of this refuse.

Sewer Ventilators.—We have a large number, many of which are at times covered up owing to complaints of the odours arising from them. Personally I do not approve of closing them, but would rather add to their number.

Ventilation of Sewers.—Owing to the complaints mentioned above we have from time to time erected shafts, mostly 6-inch cast iron shafts. In two or three instances extractors are used. Two or three of the shafts are of much larger size than the above mentioned. Frequently complaints have ceased soon after this step has been taken. We now have about forty shafts in the Borough, the majority of them being of quite recent date.

Bake-houses are inspected periodically, and are kept on the whole in fairly satisfactory condition.

Slaughter Houses are under efficient supervision, being frequently visited, and as satisfactory as buildings can be the majority of which were not erected for the purpose. A public Abattoir does not seem to be attainable, though, in the light of fuller knowledge, such a building would be very desirable.

Cow Houses.—These are also examined, and usually reported to be in a satisfactory condition. What we feel to be a serious consideration is that we have no proper control over the condition of the cow-houses and dairies outside the Borough, the larger proportion of the milk consumed being supplied by the rural districts round about. This subject must come under the serious consideration of the Legislature ere long.

Food and Drugs Act.—We have had a large number of samples analysed annually, as many as sixty last year. On this head our record is very good and second to none in the county. Annually I write a diatribe against the criminal adulterators of milk, who ruthlessly sacrifice infant life for the sake of filthy lucre. I have always advised numerous analyses of milk, the purity and richness of it having such tremendous import for our hand-fed infants, so many of whom die on the slightest pretext.

Disinfectants are frequently analysed. This is essential. We give them away gratis, to the tune of nearly £100 a year, and we once found by analysis that we were leaning on very broken reeds. It is by no means an uncommon experience to find on analysis that the disinfectants in use are nearly worthless. In my opinion the law ought to be very stringent with regard to the adulteration of articles upon which the very safety of the community depends. In a case of serious illness it ought to be manslaughter to sell extracts and essences of meat, which on analysis are proved to contain the smallest percentage of nourishment, and equally so to sell so-called disinfectants containing next to none of the ingredients upon which the safety of the household, if not that of the neighbourhood, depends. Our Government is much too slack in these matters. German methods, not usually in favour here, might well be imitated.

Factory Acts.—As you are aware, new regulations have come into force recently under these Acts. These are receiving due attention, and have doubtless tended to the increase of health, cleanliness and morality. They only require to be thoroughly enforced to effect these highly beneficent ends.

Immediate Notification Act (1889).—This useful Act was adopted and came into force on February 24th, 1896. In that year there were 307 Notifications, including 236 of Scarlet Fever, 35 of Erysipelas, 16 of Typhoid and 15 of Diphtheria and Croup. In 1897 there were 300 cases notified, including 186 of Scarlet Fever, 52 of Erysipelas, 37 of Typhoid and 12 of Diphtheria. In 1898 there were 175 cases notified, including 75 of Scarlet Fever, 36 of Erysipelas, 16 of Typhoid Fever and 39 of Diphtheria.

Unfortunately the Notification Act did not come into force in time to cut short this long-continued Scarlet Fever epidemic, cases of which at the time of writing have nearly diminished. How important its influence has been in limiting the number of cases of Typhoid the last three years we can only surmise, but yet feel absolutely certain of the invaluable aid it rendered us.

Infectious Diseases Prevention Act (1890).—We have had no occasion to take legal proceedings under this Act since its adoption on February 29th, 1896.

Fever Hospital Accommodation.—In 1885 the Sanitary Authority were reminded that the Borough was without any accommodation for fever cases, as the Workhouse Master had received orders to refuse to admit to the Fever Ward of the Infirmary other than pauper cases. In 1887 we managed to find a site to which, perhaps, less objection could be fairly raised than to any other. This was at the extreme and upper end of our own Sewage Farm, upon which sewage has never been pumped.

In 1893 one of Humphreys' iron buildings was erected on the sewage farm for 5 patients—cholera threatening. During that year 5 cases of Scarlet Fever were admitted. A cab was purchased to convey the cases to the hospital, which is about two miles off.

In 1894, 3 cases were admitted—2 of Scarlet Fever and 1 of Diphtheria. An abortive attempt was made to get neighbouring Sanitary Authorities to join in a combined Hospital Scheme.

In 1895, 43 cases were admitted—viz., 1 of Scarlet Fever and 42 of Typhoid. To accommodate all these patients—35 of whom were in-patients together—three tents were purchased, and a double pavilion of wood and iron

erected by our Borough Surveyor. In spite of rather a small amount of cubic space the patients (many of whom were exceptionally bad cases) did admirably, only two deaths resulting, one being a London nurse.

In 1896, 16 cases of Scarlet Fever, 12 of Typhoid and 1 of Variola—or 29 in all—were admitted. Three deaths from Typhoid occurred, all three being members of the same family, and the disease being particularly virulent. Telephonic communication was established, and a Nurse-Matron and Staff Nurse appointed.

In 1897, 30 cases of Typhoid and 27 of Scarlet Fever were admitted. Two deaths of very young children occurred from Scarlet Fever and Convulsions and two deaths from Typhoid, both dying a few days after admission.

Last Christmas I was appointed Medical Superintendent at a fixed salary.

We are blessed with a site almost second to none for healthiness, being over 500 feet above the sea level. If it be possible for a case to do well one may rely upon its recovery, aided by the excellent nursing which all our cases enjoy. There are no luxuries to be found either for doctors or nurses, but good honest work can be done in the most Spartan simplicity. Nothing is grudged the patients, however, as regards their medical, surgical or dietetic needs. The adults are very happy at Spittlesea until the time comes for getting up, and then it is dull. The children, however, are more easily amused; one and all go home looking the picture of health.

It only remains to add that a building for the accommodation of six cases of Small-pox has been erected at a distance of about 250 feet from Spittlesea itself, on an exceptionally healthy site with a delightful view. Luton is now just as safe from the ravages of Small-pox as a town can be that is utterly regardless of vaccination.

Thirdly, and in conclusion: I have now put you in possession of the figures and facts relating to the death and other rates; have endeavoured to enlighten you as to the sanitary work which has been going on slowly but surely in our Borough. Nothing, I think, remains of all that I set before myself but to ask whether to some extent the improved state of things, of which you have been made cognizant, may not fairly be credited to the sanitary work in which we have been engaged during the years under review—years during which it has been my privilege and pleasure to take a not inactive part as Medical Officer of Health of the Borough.

I maintain that the figures which I have laid before you—turn and twist them as you will—cannot be made to tell except in our favour. The only two rates which are on the face of them unsatisfactory are the birth and the cancer rates. The lower birth-rate is not, I believe, an unmitigated calamity—in Luton; and the slightly increased cancer-rate might possibly be explained away by the increase of population. If, then, the figures are satisfactory so is the sanitary work of the last twenty years, and I cannot doubt but that the former in a large measure depends upon the latter. Let us imagine for a moment that from 1879 to the present time no sanitary progress could have been recorded. Would it not then be unreasonable to expect any but the smallest reduction in the death and other rates? and in that case improvement certainly could not be *propter hoc*, as I hope to persuade you to some extent that it is. Without presumption, may I be allowed to say that in my humble opinion the improvement may be dissociated from faith, but cannot be dissociated from the works, in which, during the last few years, we have more and more abounded?

In and about 1879 the idea of a large epidemic occurring was scouted, for did not Luton use large quantities of sulphur for bleaching purposes and did not that ward off epidemics, therefore a fever hospital was an absolutely unnecessary luxury; one of our best men—in other departments of Corporate knowledge—held these ideas strongly.

It is only fair to myself to state that year by year from 1880 onwards, I advocated an Act for the Immediate Notification of Infectious Diseases, an Act, which in those days was the luxury of comparatively few of the larger towns. I believed, in my ignorance, that the expense of obtaining the Act alone stood in the way, but found out my mistake when some few years later a permissive Bill was passed and we failed to adopt it. A steam disinfecter is still lacking, not from want of advocacy on my part, for it is many years since I assured you that it was as real a necessity as the steam roller lately purchased. I have not as yet been able to bring you round to my way of thinking, so year by year in our Sanitary Requirements the want of a Steam Disinfecter looms large, rising in judgment against us in the County Medical Officer of Health's Review. In my opinion the health of the community is, or ought to be, the highest consideration, and the prevention and stamping out of infectious diseases is money laid out to the best and to everybody's advantage.

You can hardly understand the justifiable pride with which I view, what some might consider, the rather miserable fever encampment at Spittlesea, but they have not, like myself, fought for years, first the battle of a site, then of something to put on it, then the battle of further additions, and lastly, that of small-pox accommodation. It looks as if the ship might soon glide into much smoother water, and it is well that it should do so, for the officer getting old and grey in the service, will soon begin to have that feeling that comes sooner or later of anything for a quiet life, so that it is well that the sanitary defences of the Borough should be in good condition against the arrival of that not far-off time.

Here I must acknowledge, after these somewhat egotistical remarks, the generous help that has been ungrudgingly accorded me all these years by the permanent officials—past and present; by the Town Clerk during the whole time, and the Borough Engineer and the Inspector of Nuisances since their respective appointments. Work is more than ever a labour of love when generous help is accorded such as I have invariably received.

In conclusion, gentlemen, I thank you for your courtesy and consideration, and hope that we may work together for many a year for the Sanitary welfare of our Borough.

HORACE SWORDER,

MEDICAL OFFICER OF HEALTH.



31ST DECEMBER, 1898.

REPORT of MR. HORACE SWORDER,
Medical Officer of Health, for the Year
ended 31st December, 1898.

GEO. SELL,

TOWN CLERK.